

AMENDMENTS TO THE CLAIMS

Please amend the claims in the above-identified patent application as set forth below.

1. (currently amended): A power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, comprising:

a u-shaped, circular seal body having an inner wall portion, an outer wall portion and a seat portion, wherein the seat portion is affixed to a lower end of the inner wall portion and a lower end of the outer wall portion;

an open, u-shaped channel portion being defined by an outer diameter surface of the inner wall portion, an inner diameter surface of the outer wall portion and a top surface of the seat portion;

a plurality of ribs, each of said ribs being mounted within said open, u-shaped channel portion, wherein each of said plurality of ribs is tangentially attached to the lower end of the outer diameter surface of the inner wall portion and the lower end of the inner diameter surface of the outer wall portion, and wherein a bottom surface of each of said ribs is ~~diagonally~~ attached to the top surface of the ~~seat~~ channel portion, such that an upper end of the inner wall portion and an upper end of the outer wall portion can selectively expand and selectively contract in relation to the forces being applied to said seal body;

an inner diameter composite dynamic seal, wherein said dynamic seal is structurally formed within an inner diameter wear surface of said inner wall portion, said wear surface being comprised of PTFE; and

an outer diameter rubber static seal, wherein said static seal includes an outer diameter surface of the outer wall portion and a bottom surface of the seat portion[[]] ; and

a first lip profile affixed to an upper end of said inner wall portion and a second lip profile affixed to an upper end of said outer wall portion, such that the u-shaped, circular seal body includes a first lip profile affixed to the upper end of the inner composite dynamic seal and a second lip profile affixed to the upper end of the outer rubber static seal.

2. (currently amended): A power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, comprising:

a u-shaped, circular seal body having an inner wall portion, an outer wall portion and a seat portion, wherein the seat portion is affixed to a lower end of the inner wall portion and a lower end of the outer wall portion;

an open u-shaped channel portion being defined by an outer diameter surface of the inner wall portion, an inner diameter surface of the outer wall portion and a top surface of the seat portion;

a plurality of ribs, each of said ribs being mounted within said open channel portion, wherein each of said plurality of ribs is tangentially attached to the lower end of the outer diameter surface of the inner wall portion and the lower end of the inner diameter surface of the outer wall portion, and wherein a bottom surface of each of said ribs is ~~diagonally~~ attached to the top surface of the channel seat portion, such that an upper end of the inner wall portion and an upper end of the outer wall portion can selectively expand and selectively contract in relation to the forces being applied to said seal body;

an inner diameter composite dynamic seal, wherein said dynamic seal is structurally formed within an inner diameter composite wear surface of said inner wall portion to engage and seal a connecting rod used in the gear box; ~~and~~

an outer diameter rubber static seal, wherein said static seal includes an outer diameter surface of the outer wall portion and a bottom surface of the seat portion[.]; and

a first lip profile affixed to an upper end of said inner wall portion and a second lip profile affixed to an upper end of said outer wall portion, such that the u-shaped, circular seal body includes a first lip profile affixed to the upper end of the inner composite dynamic seal and a second lip profile affixed to the upper end of the outer rubber static seal.

3. (currently amended): The power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, as defined in claim 2, wherein the composite wear surface is disposed on said inner wall portion of the u-shaped, circular seal body between a said first lip profile of the inner wall portion and the seat portion of the seal body.
4. (previously presented): The power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, as defined in claim 3, wherein the composite wear surface is comprised of PTFE.
5. (previously presented): The power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, as defined in claim 3, wherein the composite wear surface is comprised of bronze filled PTFE.
6. (previously presented): The power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, as defined in claim 3, wherein the composite wear surface is comprised of carbon filled PTFE.
7. (canceled): The power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, as defined in claim 3, wherein the composite wear surface is comprised of aramid fiber filled HNBR.
8. (new) A power end seal for use in sealing gear boxes of heavy duty reciprocating pumps, comprising:

a u-shaped, circular seal body having an inner wall portion, an outer wall portion and a seat portion, wherein the seat portion is

affixed to a lower end of the inner wall portion and a lower end of the outer wall portion;

an open, u-shaped channel portion being defined by an outer diameter surface of the inner wall portion, an inner diameter surface of the outer wall portion and a top surface of the seat portion;

a plurality of ribs, each of said ribs being mounted within said open, u-shaped channel portion, wherein each of said plurality of ribs is tangentially attached to the lower end of the outer diameter surface of the inner wall portion and the lower end of the inner diameter surface of the outer wall portion, and wherein a bottom surface of each of said ribs is attached to the top surface of the channel portion, such that an upper end of the inner wall portion and an upper end of the outer wall portion can selectively expand and selectively contract in relation to the forces being applied to said seal body;

an inner diameter composite dynamic seal, wherein said dynamic seal is structurally formed within an inner diameter wear surface of said inner wall portion, said wear surface being comprised of aramid fiber filled rubber;

an outer diameter rubber static seal, wherein said static seal includes an outer diameter surface of the outer wall portion and a bottom surface of the seat portion; and

a first lip profile affixed to an upper end of said inner wall portion and a second lip profile affixed to an upper end of said outer wall

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portion, such that the u-shaped, circular seal body includes a first lip profile affixed to the upper end of the inner composite dynamic seal and a second lip profile affixed to the upper end of the outer rubber static seal.